

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
23 October 2003 (23.10.2003)

PCT

(10) International Publication Number
WO 03/087483 A1

(51) International Patent Classification⁷: **E03C 1/046**,
B01F 5/04

(21) International Application Number: PCT/US03/08428

(22) International Filing Date: 20 March 2003 (20.03.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
02252539.8 9 April 2002 (09.04.2002) EP

(71) Applicant (for all designated States except US): **JOHN-SONDIVERSEY, INC.** [US/US]; Neil E. Hamilton, M/S 509, 8310 16th Street, Sturtevant, WI 53177 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **HAGUE, Barry** [GB/GB]; DiverscyLever Equipment Ltd., Osier Drive

Sherwood Park, Annesley, Nottinghamshire NG150DS (GB). **OLIVER, Stephen** [GB/GB]; DiverscyLever Equipment Ltd., Osier Drive Sherwood Park, Annesley, Nottinghamshire NG150DS (GB).

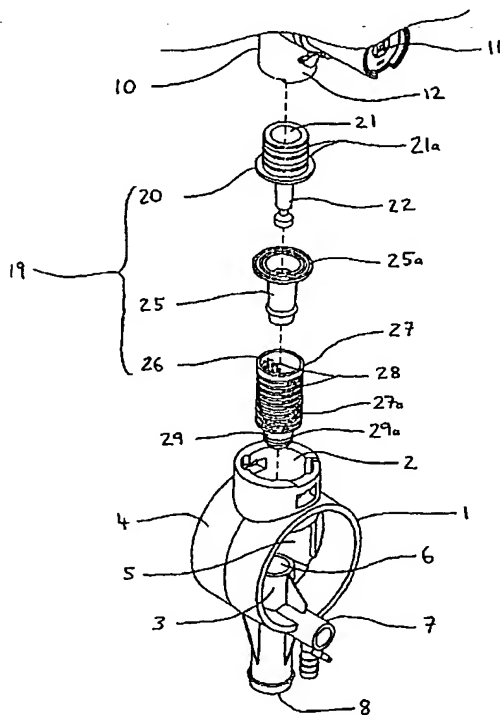
(74) Common Representative: **JOHNSON DIVERSEY, INC.**; 8310 16th Street, Sturtevant, WI 53177 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: **EDUCTOR**



(57) Abstract: An eductor (1) having an air gap (5), a venturi structure (3), and a non-return valve (19) located in the air gap (5). The non-return valve is removable and allows the eductor to be operated as an air gap eductor or a non-return valve eductor. A non-return valve cartridge (19) for installing in to the air gap (5) of an air gap eductor (1), so that the eductor can be operated as a non-return valve eductor. A method of retrofitting a non-return valve (19) in an air gap eductor (1).

WO 03/087483 A1